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Acc/aha guidelines hypertension 2019

2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APHA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults: Executive Summary: A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Whelton PK, Carey RM, Aronow WS, Casey DE Jr, Collins KJ, Dennison Himmelfarb C, DePalma SM, Gidding S, Jamerson KA, Jones DW, MacLaughlin EJ, Muntner P, Ovbigele B, Smith SC Jr, Spencer CC, Stafford RS, Taler SJ, Thomas RJ, Williams KA Sr, Williamson JD, Wright JT Jr. Whelton PK, et al. *J Am Coll Cardiol*. 2018 May 15;71(19):2199-2269. doi: 10.1016/j.jacc.2017.11.005. Epub 2017 Nov 13. *J Am Coll Cardiol*. 2018. PMID: 29146533 Review. No abstract available. Potential Cardiovascular Disease Events Prevented with Adoption of the 2017 American College of Cardiology/American Heart Association Blood Pressure Guideline. Bress AP, Colantonio LD, Cooper RS, Kramer H, Booth JN 3rd, Odden MC, Bibbins-Domingo K, Shimbo D, Whelton PK, Levitan EB, Howard G, Bellows BK, Kleindorfer D, Safford MM, Muntner P, Moran AE, Bress AP, et al. *Circulation*. 2019 Jan 2;139(1):24-36. doi: 10.1161/CIRCULATIONAHA.118.035640. *Circulation*. 2019. PMID: 30586736 Free PMC article. Introduction Hypertension is the leading cause of death, premature morbidity, and disability-adjusted life years worldwide and a primary risk factor for coronary artery disease (CAD), cerebrovascular disease (CeVD), heart failure (HF), chronic kidney disease (CKD), and dementia.1,2 Given the importance of hypertension management to reduce cardiovascular (CV) morbidity and mortality, clinical guidelines have been established to provide a framework to guide clinicians in the diagnosis and treatment of this condition. While professional medical societies have developed many hypertension guidelines, two well-established documents from North America and Europe are the 2017 American College of Cardiology (ACC)/American Heart Association (AHA) and 2018 European Society of Cardiology (ESC)/European Society of Hypertension (ESH) guidelines.3,4 Although there are key differences between these guidelines, it is important to acknowledge that there is also much overlap. In this review, we will discuss the common features and explore some of the major differences between the guidelines. Principal Areas of Agreement Between American and European Guidelines Emphasis on accuracy of BP measurements: Both guidelines recommend office blood pressure (BP) measurement on repeated visits and ambulatory blood pressure monitoring (ABPM) or home blood pressure monitoring (HBPM) to confirm the diagnosis of hypertension (Class I). ABPM uses a device worn on the patient's arm to record BP at 15- or 30-minute intervals for 24 to 48 hours during routine daily activities and sleep. HBPM is a self-monitoring tool where patients use commercially available instruments to measure and record their BPs. There is consensus that ABPM and HBPM provide a greater number of BP measurements than conventional office BPs and reflect conditions that are more representative of daily life. Additionally, both are useful tools for the diagnosis of "white coat" and masked hypertension. For adults who present with elevated office BPs but normal readings at home, ABPM or HBPM should be used to confirm diagnosis of white coat hypertension. Masked hypertension refers to untreated patients with normal office BPs but signs of end-organ damage. It is associated with an increased risk of CV morbidity and mortality and should be diagnosed using ABPM or HBPM. Cardiovascular-risk calculator to determine BP treatment thresholds: ESC guidelines utilize the Systematic Coronary Risk Evaluation (SCORE) system to estimate CV risk for patients with hypertension at the time of initial diagnosis prior to initiation of pharmacotherapy or whenever changes occur to BP readings.4 Since 2003, the European CV prevention guidelines have recommended the SCORE risk estimate because it is based on large, representative European cohorts and estimates the 10-year risk of a first fatal atherosclerotic cardiovascular disease event in relation to age, sex, smoking habits, total cholesterol level, and systolic BP (SBP). It also allows for country-specific risk calibration in European countries based on CV disease risk levels and has been externally validated. The ACC/AHA guidelines recommend use of the Atherosclerotic Cardiovascular Disease Risk (ASCVD) calculator using the Pooled Cohort Equation (PEC) for determination of BP targets. Both guidelines recognize that treatment decisions based on aligning thresholds with CV risk offer a more rational and evidence-based approach. If the CV risk is low, both recommend initial emphasis on lifestyle modifications prior to initiation of pharmacotherapy. While the Europeans identify hyperuricemia and elevated heart rate as CV disease risk factors, American guidelines do not recognize them due to limited evidence that treatment improves clinical outcomes. BP treatment targets: When comparing the guidelines, the definition of normal (as used in the ACC/AHA guidelines) or optimal BP (as used in the ESC/ESH guidelines) is the same for systolic BP (